SW-1S/1C/1W SERVICE MANUAL

(Revision 0.1 / 2008.06.17)

< Table of Contents >

1. Introduction 3
1.1. Preface 3
1.2. Precaution 3
1.3. Specifications 4
1.4. Key 6
1.5. Dimension 6
1.6. Sealing Method 8
2. Calibration 10
2.1. General Calibration 10
2.1.1. C4 Setting 11
2.1.1.1. C4-1 Setting 11
2.1.1.2. C4-3 Setting 11
2.1.2. SPAN Calibration Setting (C-3) 12
2.1.3. Gravity Constant Value Setting (C-9) 12
2.1.4. Calibration factor Setting (C-10) 13
2.1.5. Displaying Real A/D Value (C-5) 13
2.1.6. Percent Calibration (C-7) 14
2.1.7. Battery Calibration (C-8) 14
3. The Schematics and Diagram 15
3.1. System Block Diagram 15
3.2. Circuit Diagram 16
3.2.1. Main PCB 16
3.2.2. Power Part (Main PCB) ..... Error! Bookmark not defined.
3.2.3. Rear Display PCB 17
4. Exploded View 18
5. Load Cell drawing 20
6. Part Location 21
6.1. Main PCB (Top) 21
6.2. Main PCB (Bottom) 22
6.3. Rear Display PCB (Top) 23
7. Error Messages & Solution 24
8. Part List 25

1. Introduction

1.1. Preface

Thank you for purchasing of our CAS scale.

This scale has been designed with CAS reliability, under rigid quality control and with outstanding performance.

WE hope that your departments enjoy with high quality of CAS product.

This manual will help you with proper operations and care of the SW-1S/1C/1W series.

Please keep it handy for the future references.

1.2. Precaution

- Make sure that you plug your scale into the proper power outlet.
- Place the scale on a flat and stable surface.
- Plug into a power outlet 30 minutes before operations.
- Keep the scale away from strong EMI noises may cause incorrect weight readings.
- This scale must be installed in a dry and liquid free environment.
- Do not subject the scale to sudden temperature changes.
- Do not subject the platter to sudden shocks.
- If the scale is not properly level, please adjust the 4 legs at the bottom of the scale (turn legs clockwise or counterclockwise) so as to center the bubble of the leveling gauge inside the indicated circle.

1.3. Specifications

		SW-1S/1C/1W-02	SW-1S/1C/1W-05	SW-1S/1C/1W-10	SW-1S/1C/1W-20	SW-1S/1C/1W-30
Resolution	Capacity / e	*Dual Interval* 1 kg / 0.0005 kg 2 kg / 0.001 kg	*Dual Interval* 2.5 kg / 0.001 kg 5 kg / 0.002 kg	*Dual Interval* 4 kg / 0.002 kg 10 kg / 0.005 kg	*Dual Interval* 10 kg / 0.005 kg 20 kg / 0.01 kg	*Dual Interval* 15 kg / 0.005 kg 30 kg/ 0.01kg
	Internal	1 / 60,000	1 / 60,000	1 / 60,000	1 / 60,000	1/60,000
	External	1 / 2,000	1 / 2,500	1 / 2,000	1 / 2,000	1 / 3,000
	Max. Tare	- 0.9995 kg	- 2.449 kg	- 3.998 kg	- 9.995 kg	- 14.995 kg
Display		110 x 35[mm]/43" x 13.8" 5 digit LCD				
Indicators		STABLE, ZERO, TARE, g, kg, lb, oz, Low Battery HI / OK / LO & PCS (SW-1C only)				
Keys		ZERO, TARE, HOLD(Hold Ver.), UNIT(Unit Ver.), MODE(SW1C), POWER				
Functions		Weighing, WaterProof level IP66(SW-1W only) Hold(Hold Ver.), Unit Conversion(Unit Ver.), Counting-Counting SampleRange : 10~100,200,300,400,500 (SW-1C only) Weight Comparison Function : hi, ok, low(SW-1C only) Sleep Mode Function				
Dimension		260(W) x 287(D) x 137(H)[mm] / 102(W) x 113(D) x 54(H)[inch] 278(W) x 317(D) x 141(H)[mm] / 109(W) x 125(D) x 56(H)[inch] (SW-1W : WaterProof Type)				
Platter Size		230(W) x 190(D)[mm] / 90.55(W) x 74.80(D)[inch] 247(W) x 195(D)[mm] / 97.24(W) x 76.77(D)[inch] (SW-1W : WaterProof Type)				
Weight		2.8kg 3.7kg(SW-1W : WaterProof Type)				
Power		1.5V x 6 units (D size Battery) or 9V Adapter				
Op.Temperature		-10°C ~ +40°C / 14°F ~ 104°F				
Options		9V Adapter 300mA, Rear Display, Stainless Tray (SW-1S, SW-1C)				

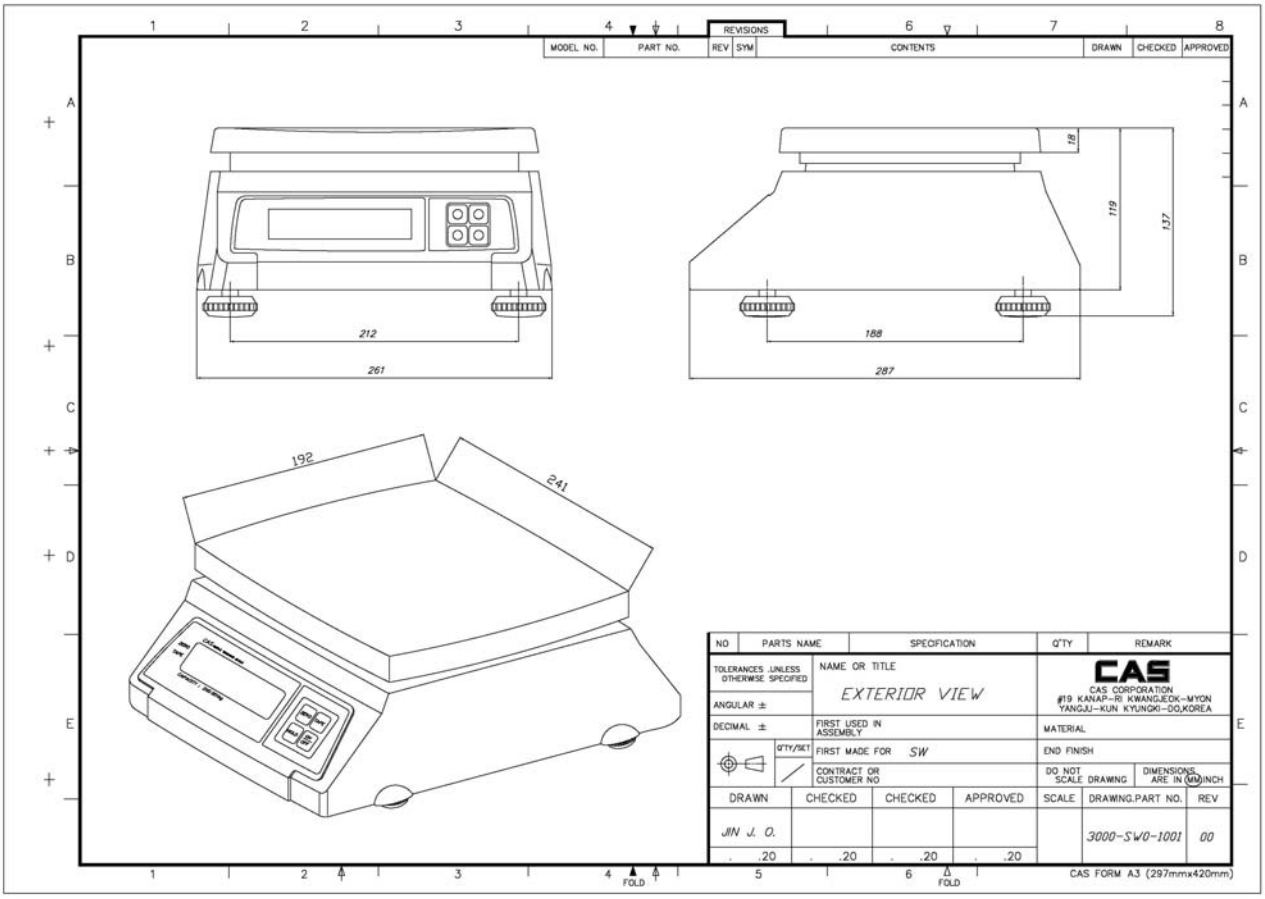
Minimum Voltage Level The Battery	About 5.5V
Operation time	Approx. 500hours (Manganese battery)/ 1000hours (Alkaline at 20°C /68°F)

1.4. Key

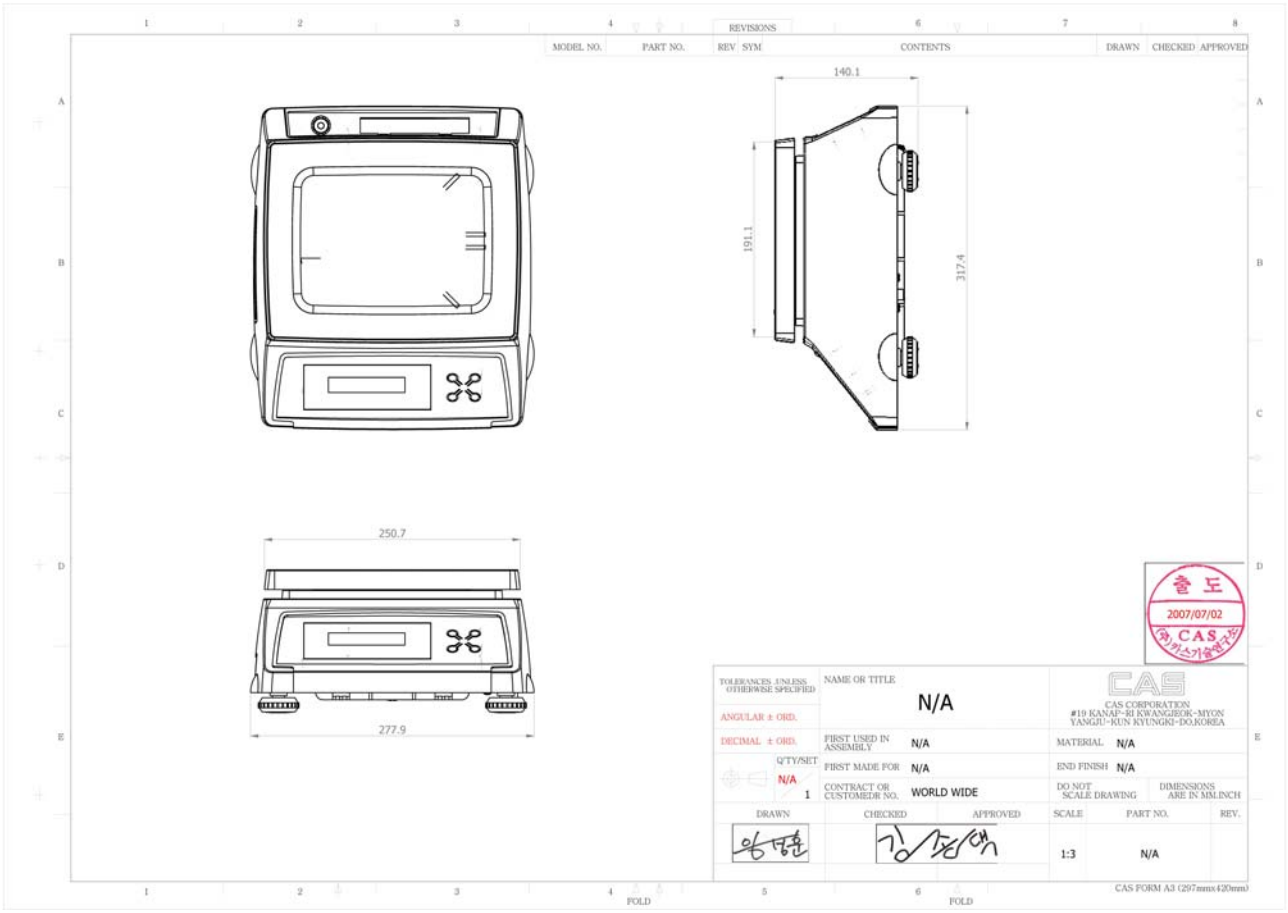
Key	Function
ZERO (-O-) **[Set]**	To set zero point To do **[SET]** key in the SETUP mode.
TARE	To input or cancel the tare (the weight of container).
HOLD	To make the weight of item stable. This weight is average value.
POWER	• To turn on or off.

1.5. Dimension

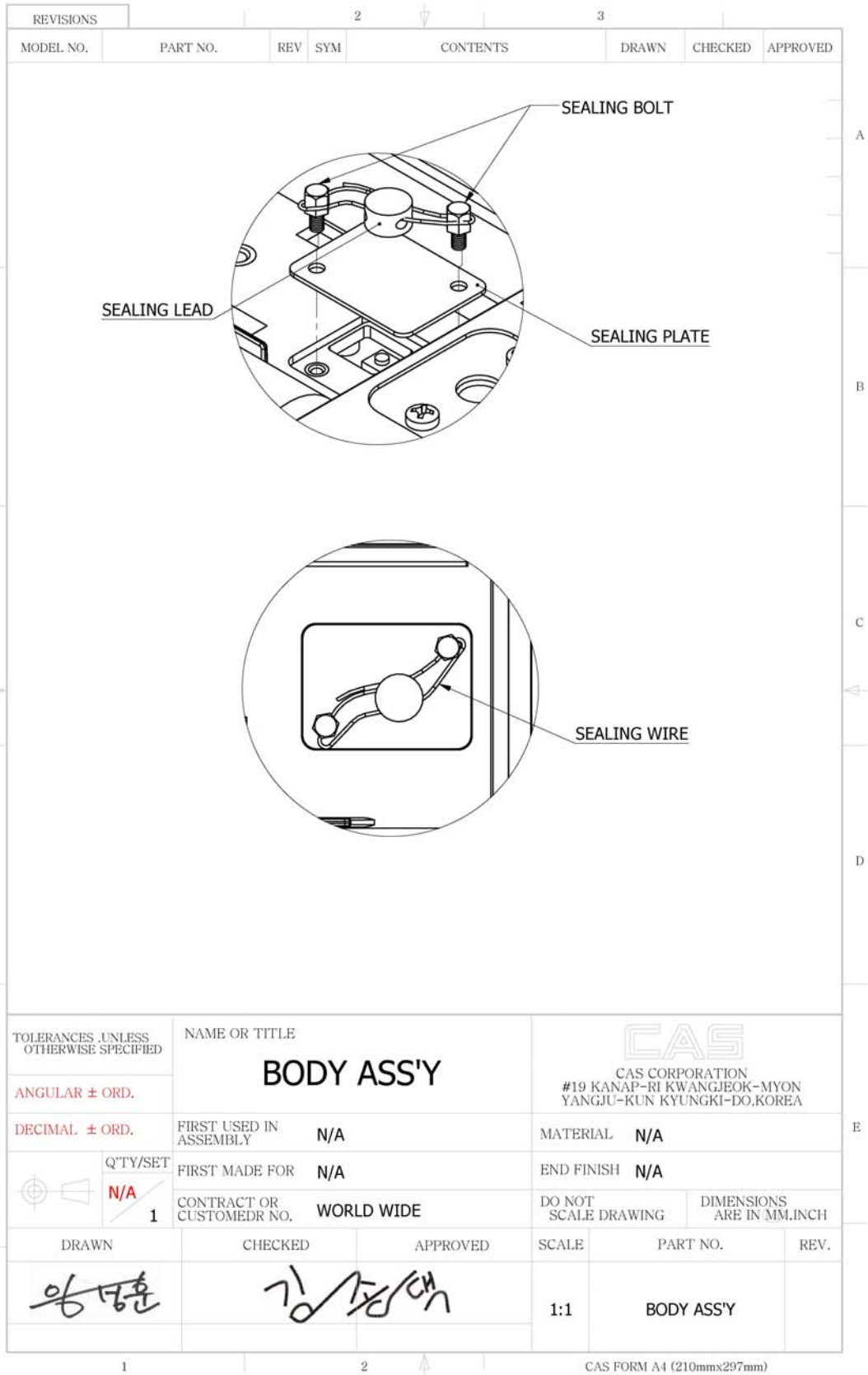
1.5.1. SW-1S/1C



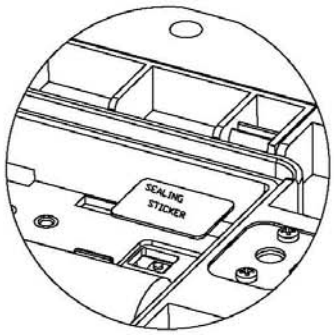
1.5.2. SW-1W


REVISIONS
MODEL NO.
PART NO.
REV. SYM
CONTENTS
DRAWN
CHECKED
APPROVED
140.1
191.1
317.4
250.7
277.9
출 도
2007/07/02
CAS
TOLERANCES UNLESS OTHERWISE SPECIFIED
ANGULAR ± ORD.
DECIMAL ± ORD.
NAME OR TITLE
N/A
FIRST USED IN ASSEMBLY
N/A
FIRST MADE FOR
N/A
CONTRACT OR CUSTOMER NO.
WORLD WIDE
QTY/SET
N/A
1
CAS CORPORATION
#19 KANAF~RI KWANGRIOK~MYON
YANGJU~KUN KYUNGKI~DO,KOREA
MATERIAL
N/A
END FINISH
N/A
DO NOT SCALE DRAWING
DIMENSIONS ARE IN MM.INCH
DRAWN
CHECKED
APPROVED
SCALE
1:3
PART NO.
N/A
REV.
FOLD
FOLD
CAS FORM A3 (297mmx420mm)

1.6. Sealing Method



REVISIONS							
MODEL NO.	PART NO.	REV	SYM	CONTENTS	DRAWN	CHECKED	APPROVED



상세 A
배율 1 : 2

상세 B
배율 1 : 2

출 도
(주)CAS 카스기술연구소

TOLERANCES UNLESS OTHERWISE SPECIFIED ANGULAR ± ORD. DECIMAL ± ORD.	NAME OR TITLE SEALING METHOD	CAS CAS CORPORATION #19 KANAP-RI KWANGJEOK-MYON YANGJU-KUN KYUNGKI-DO,KOREA
	FIRST USED IN ASSEMBLY N/A	MATERIAL N/A
Q'TY/SET N/A / 1	FIRST MADE FOR N/A	END FINISH N/A
	CONTRACT OR CUSTOMEDR NO. WORLD WIDE	DO NOT SCALE DRAWING / DIMENSIONS ARE IN MILLINCH

DRAWN	CHECKED	APPROVED	SCALE	PART NO.	REV.
양명훈	김정대		1:2	BODY ASS'Y	
2007년 7월 3일 화요일 오후 3:53:13					

CAS FORM A4 (210mmx297mm)

2. Calibration

2.1. General Calibration

Pressing and holding calibration switch press [POWER] key to go to calibration mode.

User can move to other mode by using [ZERO] key in the calibration mode.

User also moves to other sub-modes for each mode by using [TARE] key.

Please simply follow below procedure to move to other mode.

- Calibration Mode: Pressing and holding "Calibration Switch" press [POWER] key.
- It displays "CAL-0" after "CAL", and it blinks the version of scale three times.
- Selecting menu: press [TARE].
- ENTER(Setting) : [TARE] key

MODE	Function
CAL 1	Display normalized AD
CAL 2	Display Keypad infomation-
CAL 3	Calibration 'Zero' key to select 'ZERO' 'Zero' key to proceed 'Midup' (Refer to table in 2.1.2. C-3) 'Zero' key to proceed 'Full' Full weight 'Zero' key to proceed 'Middn' (Refer to table in 2.1.2. C-3), 'Zero' key to proceed
CAL 4	Option Setting (Refer to Table 1)
CAL 5	Display filtered Raw AD
CAL 7	% Calibration
CAL 8	Battery calibration
CAL 9	Gravity constant
CAL 10	Set calibration factor Refer to 2. 1. 4
CAL 11	Set nation(00 : OIML , 01 : NTEP , 02: KOREA)

< Modes >

2.1.1. C4 Setting

2.1.1.1. C4-1 Setting

BIT 6~7	Initial Zero range	3	5%
		2	10%
		1	3%
		0	2%
BIT5	Last digit enable	0	Disable
		1	Enable
BIT4	Key zero percent	0	±3% key zero percent
		1	±2% key zero percent
BIT 2~3	Successive tare	3	(+), (-) All Direction successive Tare
		2	(+) Direction successive Tare
		1	(-) Direction successive Tare
		0	One Time tare
BIT0~1	Zero mark type	0	Gross zero indication
		1	Net zero indication
		2	Both(gross and net) zero indication

2.1.1.2. C4-3 Setting

BIT7	Dot Type	0	"." dot
		1	"," comma
BIT6	Use Preset tare	0	Don't use
		1	Use
BIT5	Use Back light	0	Don't use
		1	Use
BIT4	Use Head message	0	Don't use
		1	Use
BIT3	Use gram	0	Don't use
		1	Use
BIT2	Use oz	0	Don't use
		1	Use
BIT1	Use lb	0	Don't use
		1	Use
BIT0	Use Kg	0	Don't use
		1	Use

2.1.2. SPAN Calibration Setting (C-3)

- Pressing and holding “Calibration Switch” press [POWER] key.
- After “CAL” message blinks three times and shows the version of scale, it displays “CAL 1” message.
- Press [Tare] / [Mode] to display “CAL-3”.
- Press [Zero] key and then it displays “zero” message.
- Press [Zero] key and then it displays “midup” message
- Load middle up weight (Refer to table below) on the platform
- Press [Zero] key and then it displays “FULL ” message
- Load full weight on the platform
- Press [Zero] key and then it displays “middn” message
- Load middle down weight (Refer to table below) on the platform
- Press [Zero] key and then it display “CAL 3” message
- Press [Power] key to save & switch off

Table for Cal weights

Full	Half weight
20	10
10	5
5	2
2	1

2.1.3. Gravity Constant Value Setting (C-9)

Current gravitational Acceleration value is set to 9.7994 m/s^2 .

Pressing and holding “Calibration Switch” press [POWER] key.

After “CAL” message blinks three times and shows the version of scale, it displays “CAL-1” message.

Press [ZERO] to display “C-9”.

Press [TARE] key, and then “ G-1“ message and “9.7994” will be shown. The first digit,”9” will blink.

Input a gravitational acceleration value by using [ZERO] key.

Press [TARE] key, and then “G-2“ message blinks.“9.7994” will be shown. The first digit,”9” will blink.

Input a gravitational acceleration value by using [ZERO] key.

Press [TARE] key to save the gravitational acceleration value, and “C-9 ” message will be shown.

2.1.4. Calibration factor Setting (C-10)

- Pressing and holding "Calibration Switch" press [POWER] key.
- After "CAL" message blinks three times and shows the version of scale, it displays "CAL-1" message.
- Press [MODE] or [TARE] to move to display "C-10".
- Press [ZERO] key, and then "UNIT "message and "0" will be shown. The first digit,"0" will blink. It means calibration unit is "kg" (0 : kg, 1 : lb)

Input a calibration unit by using [MODE] key.

- Press [ZERO] key and then "CAPA"message blinks. "0015" will be shown. The first digit,"0" will blink. It means a full-capability is "15 (calibration unit, kg or lb)"

Input a capability by using [MODE] key to change value [TARE] key to move the right.

- Press [ZERO] key, and then "MId"message blinks. "0005" will be shown. The first digit,"0" will blink. It means a mid-capability is "05 (calibration unit, kg or lb)"

Input a capability by using [MODE] key to change value [TARE] key to move the right.

- Press [ZERO] key, and then "W-dP "message blinks. "3" will be shown. The first digit,"3" will blink. It means a weight decimal point is "3 (will display 0.000)"

Input a weight decimal point by using [MODE] key.

- Press [ZERO] key, and then "1d "message blinks."0.005" will be shown. The third digit,"0" will blink. It means a division is "0.005 (calibration unit, kg or lb)"

Input a division by using [MODE] key to change value [TARE] key to move the right.

- Press [ZERO] key, and then "dual "message blinks. "1" will be shown. The third digit,"1" will blink. It means a dual interval is disable. (0 : disable, 1 : enable)"

Input a dual interval enable by using [MODE] key.

- Press [ZERO] key, and then "TARE "message blinks. "0" will be shown. The third digit,"1" will blink. It means a dual interval is disable. (0 : disable, 1 : enable)"
- Press [ZERO] key to save the calibration factor and "C-10" message will be shown.
- Turn off scale to save

2.1.5. Displaying Real A/D Value (C-5)

Display Raw AD

2.1.6. Percent Calibration (C-7)

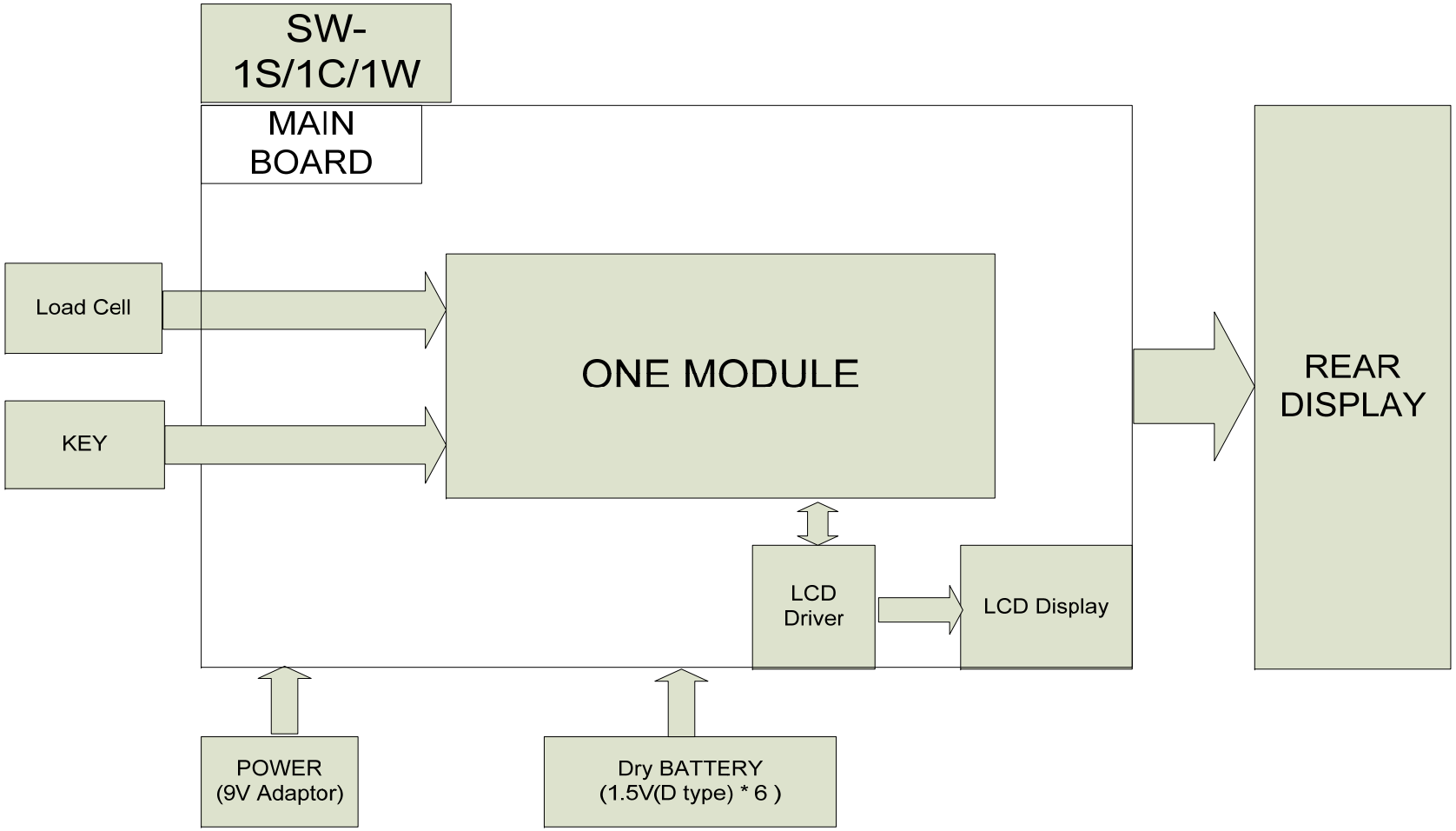
(1) Pressing and holding “Calibration Switch” press [POWER] key.
After “CAL” message blinks three times and shows the version of scale, it displays “CAL 1” message.
(2) Press [ZERO] to display “CAL-7”.
(3) Press [TARE] key and then it displays “per 0 ” message. Select the percent value using the
[numeric] key. You can choose 10~90 percent. (Last digit of percent must be 0.)
(4) Press [TARE] key and then it displays “zero” message
(5) Press [TARE] key and then it displays “pspan ” message
(6) Load choice percentage weight of full weight on the platform
(7) Press [TARE] key and then it displays “CAL 7” message

2.1.7. Battery Calibration (C-8)

(1) Pressing and holding “Calibration Switch” press [POWER] key.
After “CAL” message blinks three times and shows the version of scale, it displays “CAL 1” message.
(2) Press [ZERO] to display “CAL-8”.
(3) Press [TARE] key and then it displays voltage of battery.
(4) Change the jumper-pin of main PCB, ‘BAT’ to ‘+5V’.
(5) Press [ZERO] key two times and then Press [-] key two times.
And then it display ‘500’
(6) Change the jumper-pin of main PCB, ‘+5V’ to ‘BAT’.
(7) You can see the calibrated voltage of battery.

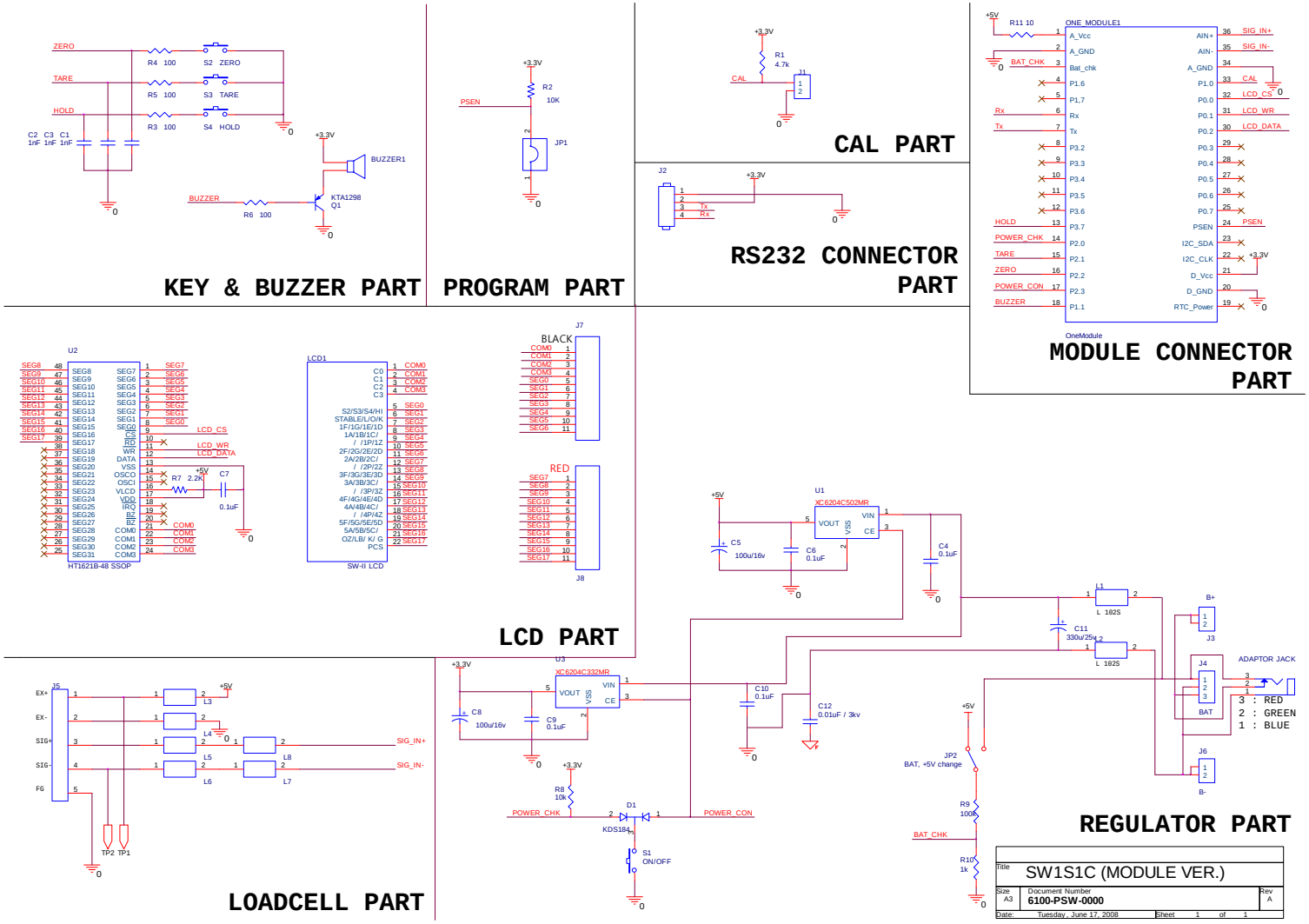
3. The Schematics and Diagram

3.1. System Block Diagram

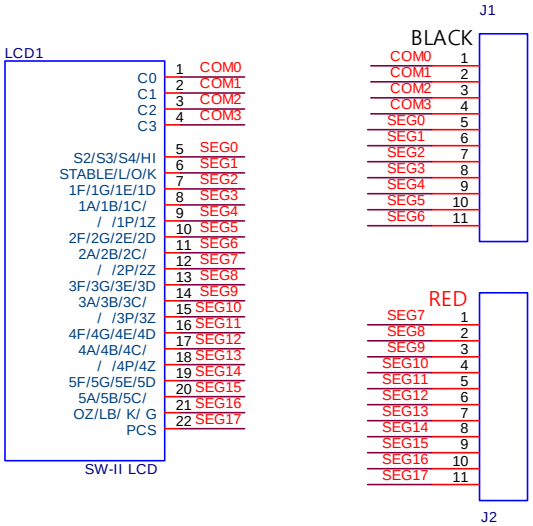


3.2. Circuit Diagram

3.2.1. Main PCB



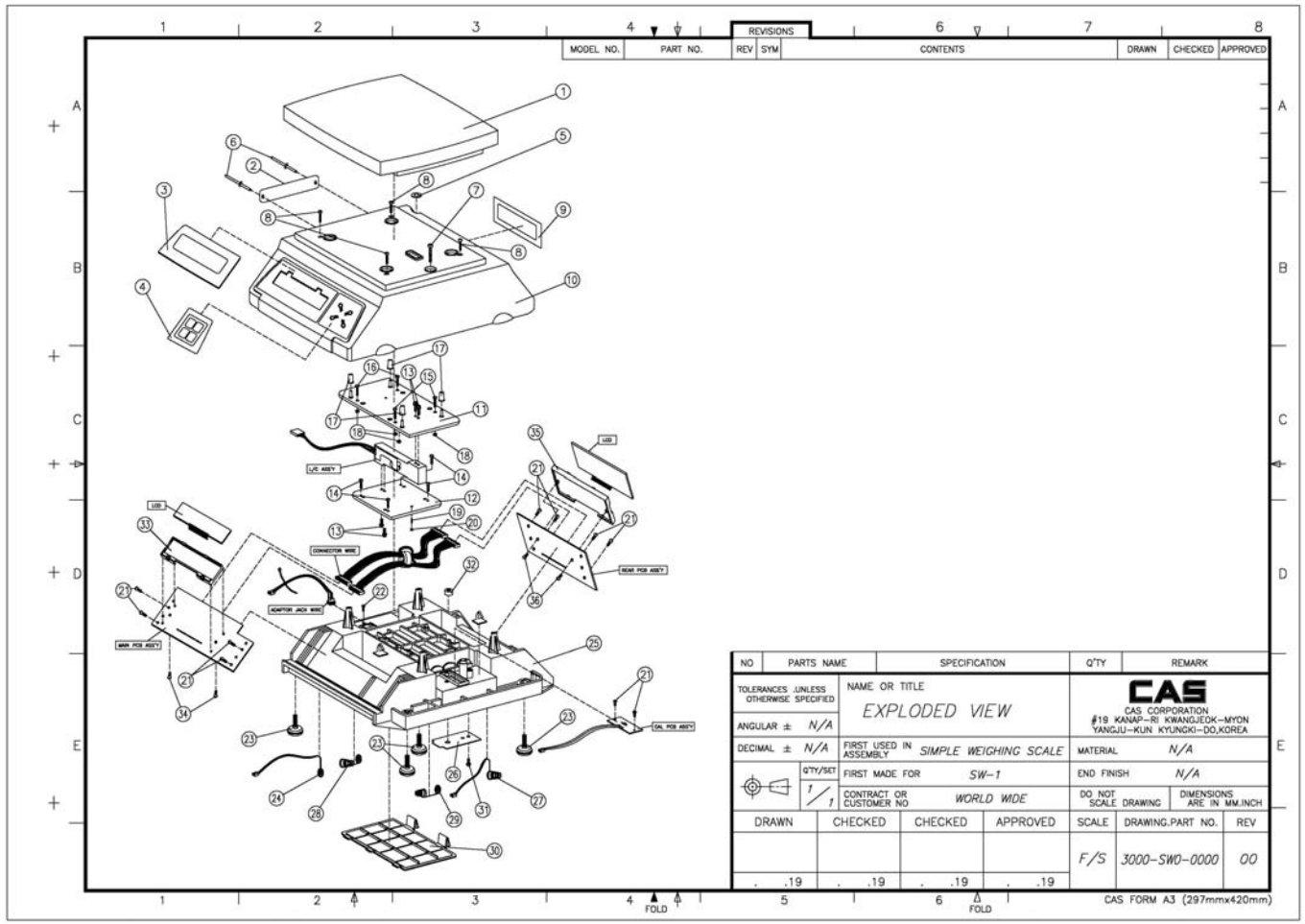
3.2.2. Rear Display PCB



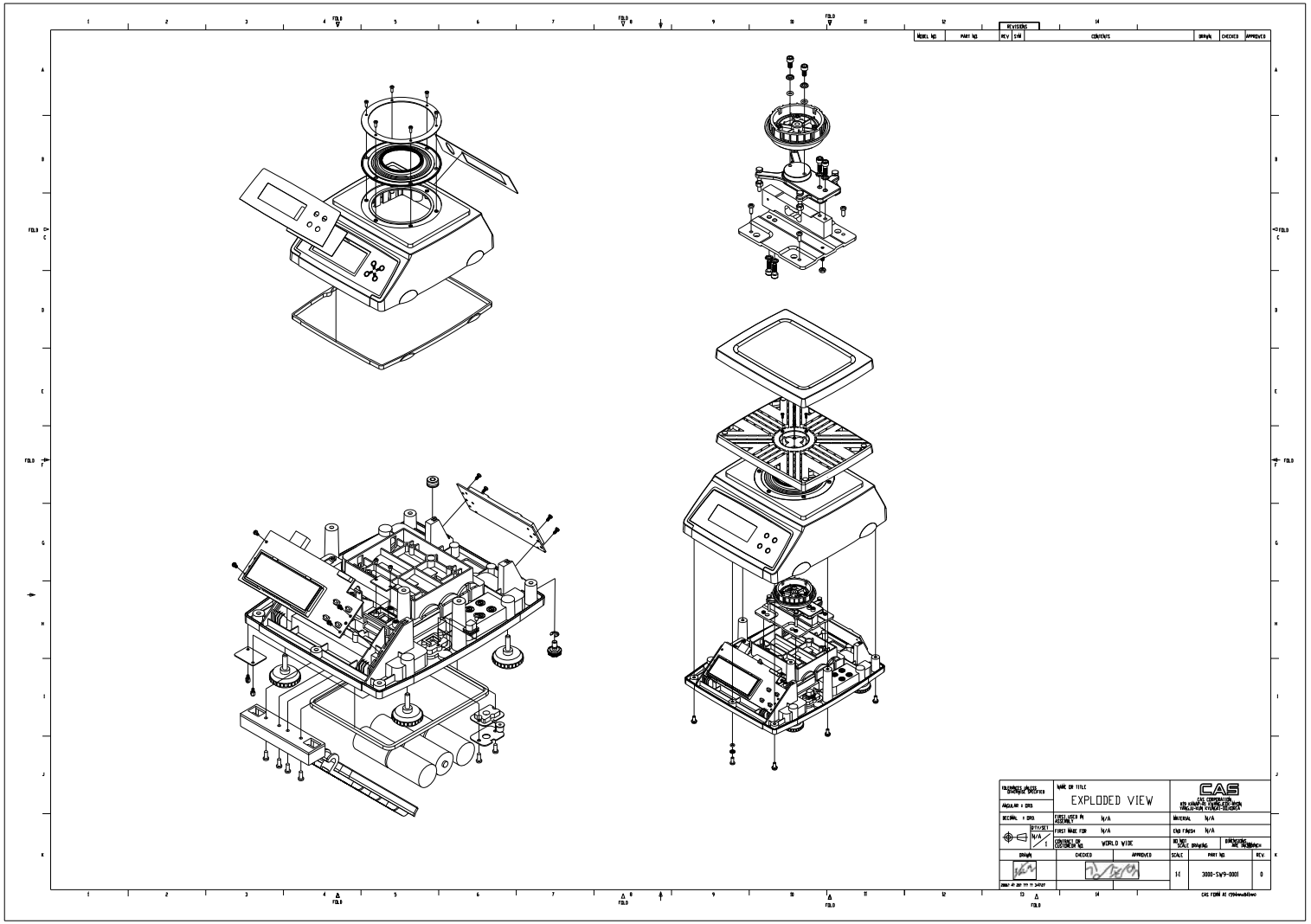
Title	SW-1S/1C/1W REAR DISPLAY PCB	
Size A	Document Number 6110-PSW-0000-0	Rev 0
Date: Tuesday, June 17, 2008	Sheet 1 of 1	

4. Exploded View

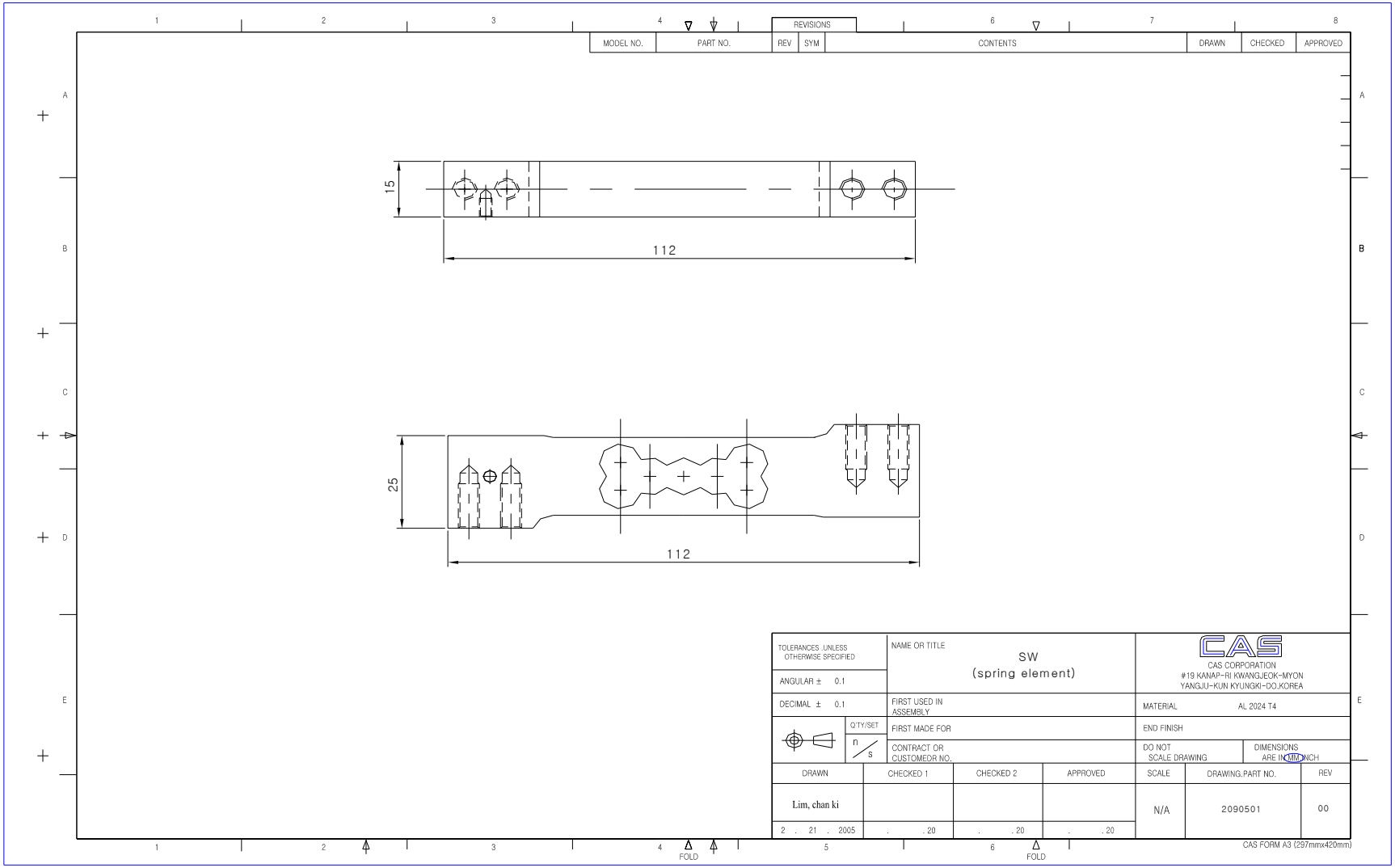
4.1. SW-1S/1C



4.2. SW-1W

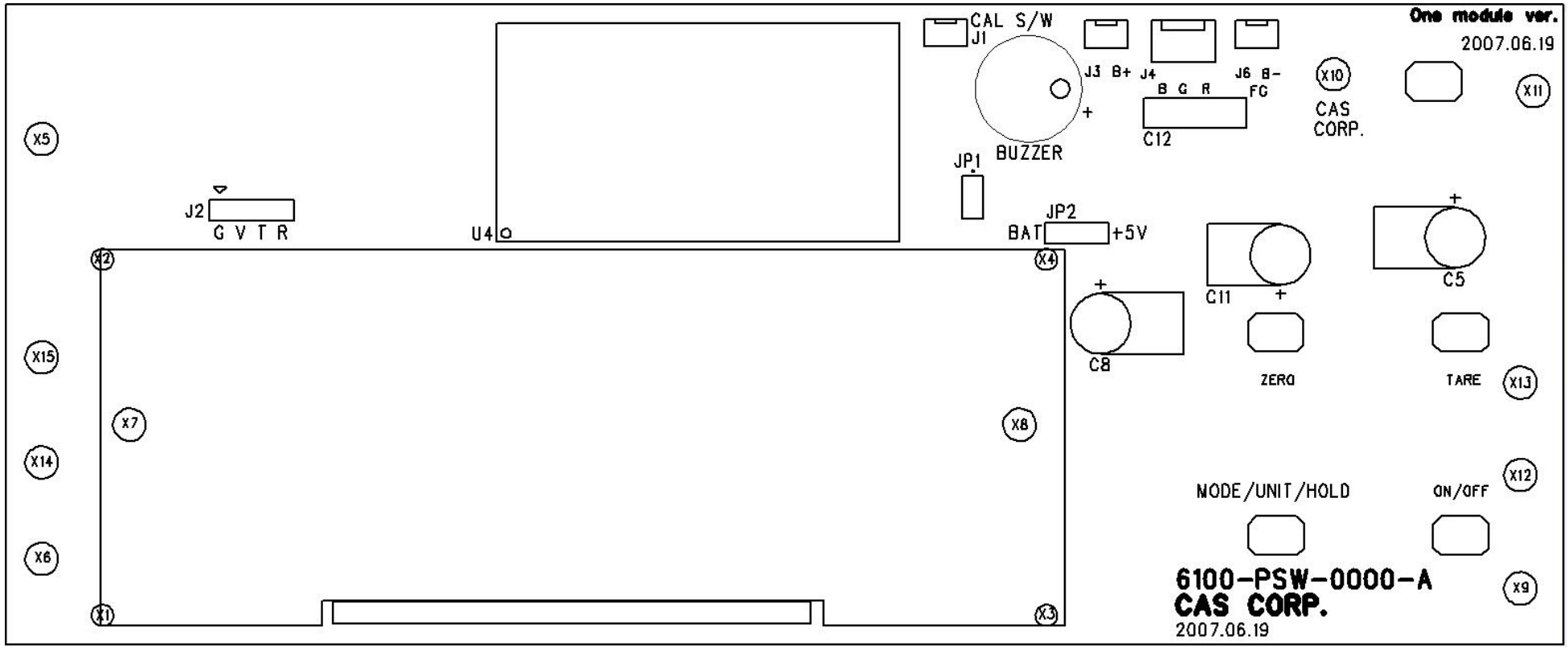


5. Load Cell drawing

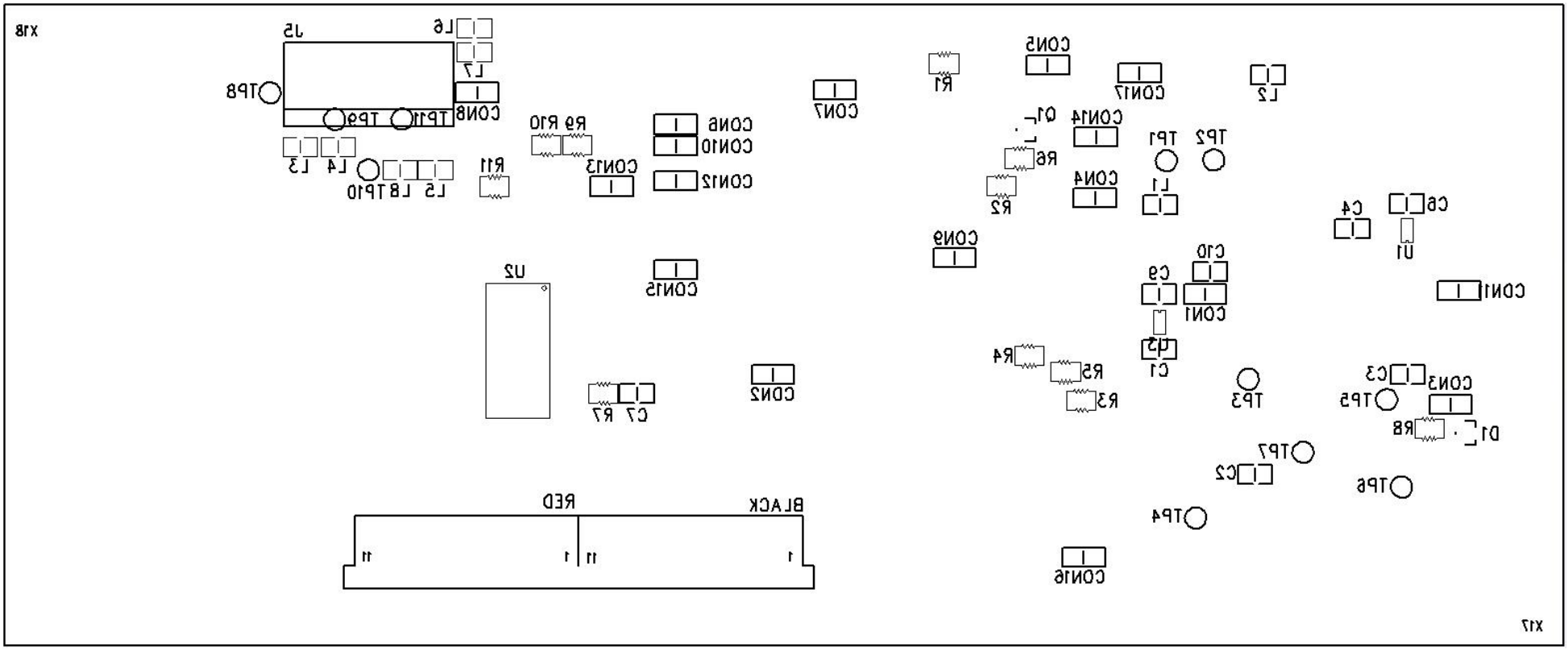


6. Part Location

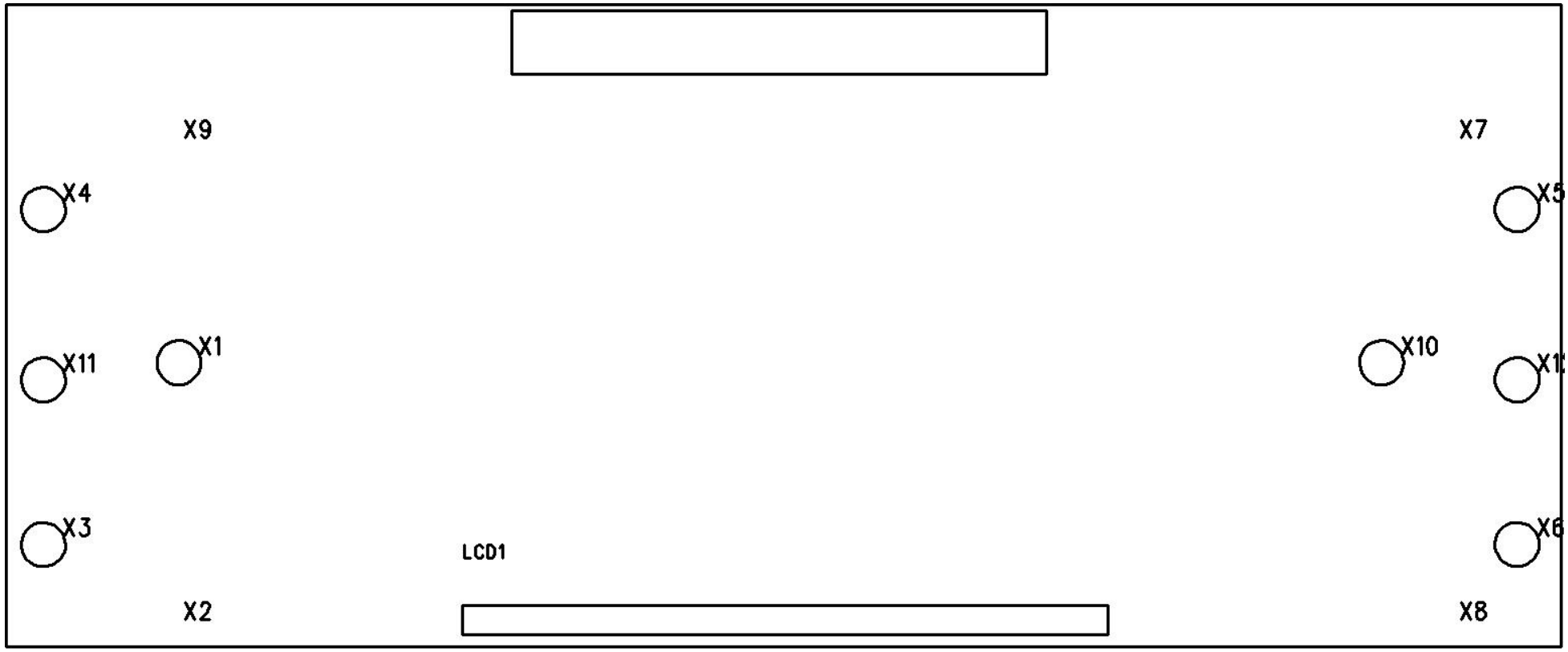
6.1. Main PCB (Top)



6.2. Main PCB (Bottom)



6.3. Rear Display PCB (Top)



7. Error Messages & Solution

Error Message on Display	Description	Solution
"Err 0"	The "Err 0" occurs when scale is not stable.	Remove unstable facts.
"Err 1"	The "Err 1" occurs when a current zero point has shifted from the last span calibration.	Please call your CAS dealer.
"Err 2"	The "Err 2" is not a real error. Only it prompts return CAL switch to the normal position.	Please call your CAS dealer.
"Err 3"	The "Err 3" is an overload error.	Please remove the weight.
"Err 9"	The "Err 9" is no weight error. When scale is in counting mode, you must load the weight. If you have no weight on your scale, you can see this error message.	Please load the weight on your tray.
“Err 11”	The "Err 11" means a writing error of the internal nonvolatile memory. To recognize this error, be sure to check the voltage on the circuit and do calibration procedures.	If it still has "Err 11", replace the digital module.
“Err 12”	The "Err 12" warns that the scale has lost the parameters for weighing regulations or has lost the factors for a digital span calculation.	Enter each condition codes again. Please try a span calibration again if still not fixed.
“Err 14”	The "Err 14" means calibration range is not correct.	Please call your CAS dealer.

8. Part List

8.1.1 SW-1S/1C/1W (Electronic part)

1.1 MAIN PCB ASS'Y [140SW5EMAPUN0101]

No	Part Name	Specification	Part Number	Q'ty	Remark
	MAIN PCB ASS'Y		**140SW5EMAPUN0101**	**1**	**MAIN PCB ASS'Y**
1	PCB-MAIN	6100-PSW-0000-A(SW-1S)	6100PSW0000A	1	MAIN PCB
2	ONE MODULE	ONE MODULE	6PA0A0000000	1	U4(ONE MODULE NO OPTION)
3	IC(REGULATOR)	XC6204C502MR(5.0V)	6220IS0C5020	1	U1
4	IC(REGULATOR)	XC6204C332MR(3.3V)	6220IS0C3320	1	U3
5	IC(LCD DRIVER)	HOLTEX HT1621B	6224I0016210	1	U2
6	TRANSISTOR CHIP	KTA1504 SY	6281I0015040	1	Q1

7	DIODE-CHIP	KDS184	6294ICP01840	1	D1
8	RESISTOR-CHIP 1/10W	WR06X0000JT(0Ω)	6527ID00000A	17	CON1~17
9	RESISTOR-CHIP 1/10W	RR1220P-100D(10Ω)	6527ID001000	1	R11
10	RESISTOR-CHIP 1/10W	RR1220P-222D(2.2K)	6527ID300220	1	R7
11	RESISTOR-CHIP 1/10W	RR1220P-104D(100K)	6527ID310000	4	R1,2,8,9
12	RESISTOR-CHIP 1/10W	RR1220P-102D(1K)	6527ID300100	1	R10
13	RESISTOR-CHIP 1/10W	RR1220P-101D(100)	6527ID010000	5	R3,4,5,6
14	INDUCTANCE	HB-1M2012-102JT(TP2,LP2,DBB)	6670T0001020	8	L1,2,3,4,5,6,7,8
15	CONDENSER-CERAMIC	0.01uF/3KV	6710CAP0103B	1	C12
16	CONDENSER-ELECTRIC	330uF/25V	6704C2503300	1	C11
17	CONDENSER-ELECTRIC	100uF/16V	6704C1601000	2	C5,8
18	CONDENSER-CHIP	CL21F 102KBNC	6712CHP01020	3	C1,2,3

19	CONDENSER-CHIP	CL21F 104KBNC	6712CHP01040	5	C4,6,7,9,10
20	CONNECTOR(WAFER)	LAL0640-02 (LAW250-02)	7809CAL00020	3	J1,3,6
21	CONNECTOR(WAFER)	LAL0640-03 (LAW250-03)	7809CAL00030	1	J4
22	CONNECTOR(WAFER)	LAL0640-11 (LAW250-11)	7809CAL00110	2	LCD_CON
23	PIEZO BUZZER	APR,ADR(CHINA)	7002Z0000000	1	BUZZER
24	TACT S/W	KPT-1105B(DJTA-1102C)	7600STA1105B	4	ZERO,TARE,HOLD,ON/OFF KEY
25	JUMPER	10PIN	7821CJM00100	1	JP1(2PIN),JP2(3PIN),J2(4PIN)
26	BRACKET-LCD	DTE 101754AJP 1(SW)	2000A0000660	1	LCD1
27	LCD	114.8*44.8*BLACK(SW-1)	7212D0040920	1	
28	GROUND WIRE	100mm(DB-Ⅱ)	7860GND01000	1	FG

1.2 REAR DISPLAY PCB ASS'Y [140SW1MDIPUN0104]

No	Part Name	Specification	Part Number	Q'ty	Remark
	REAR DISPLAY PCB ASS'Y	**SW-1S**	**140SW1MDIPUN0104**	**1**	**REAR DISPLAY PCB ASS'Y**
1	BRACKET-LCD	DTE 101754AJP 1(SW)	2000A0000660	1	
2	PCB-DISPLAY	6110-PSW-1130-0(SW)	6110PSW11300	1	
3	LCD	DTE 101754AJP 1(SW)	7212D0040920	1	LCD
4	FLAT CABLE CONNECTOR	(10+11)P*350mm(CORE,SW 양면)	7850W0021350	1	

1.3 CAL PCB ASS'Y [140SW6ECAPUN0101]

No	Part Name	Specification	Part Number	Q'ty	Remark
	CAL PCB ASS'Y	**SW-WR**	**140SW6ECAPUN0101**	**1**	**CAL PCB ASS'Y**

1	PCB-CAL	6151-PSW-0000-0(SW1-S/1C)	6151PSW00000	1	
2	TACT S/W	11902(DJTA-1102)	7600STA19020	1	
3	CONNECTOR WIRE	2P*140m/m(SW)	7840W000214B	1	

8.1.2 SW-1S/1C (Mechanical part)

1.1 BODY ASS'Y [140SW4SBODUN0103]

SW-1S	반제품	140SW4SBODUN0103	BODY ASS'Y	SW-1S	Q'ty
BODY ASS'Y	자재	1590A000006A	BATTERY SPRING B	ø0.9*ø16*50*19-SUS(SW-1)	1
BODY ASS'Y	자재	1590A000007B	BATTERY SPRING C	ø0.9*ø16*37*8	1
BODY ASS'Y	자재	1590A000014A	BATTERY SPRING A	ø0.9*ø16*50*19(SW-1)	1
BODY ASS'Y	자재	1590A0000240	BATTERY SPRING D	ø0.9*ø16*37*26-SWP(SW-1)	1
BODY ASS'Y	자재	7840W000219B	CONNECTOR WIRE	2P*190mm SW-WP (+)BATTERY WIRE	1
BODY ASS'Y	자재	7840W0002230	CONNECTOR WIRE	2P*230mm SW-WP (-)BATTERY WIRE	1

BODY ASS'Y	자재	7840W0003230	CONNECTOR WIRE	3P*230mm-303(EP,SW)	1

1.2 C/T BOX ASS'Y [140SW4MCTBUN0103]

SW-1S	반제품	140SW4MCTBUN0103	C/T BOX ASS'Y	SW-1S	
C/T BOX ASS'Y	자재	7510P0911220	ADAPTOR	110/220V9V/300mA(EP,PW)	1
C/T BOX ASS'Y	자재	7520P0001500	BATTERY-MN	R20-1.5V-D(TP,SW)	6
C/T BOX ASS'Y	자재	9002SW300330	MANUAL	SW-1S1C1W(영문)	1
C/T BOX ASS'Y	자재	9100SW00133B	C/T BOX	SW-1(360*297*215, 영문)	1
C/T BOX ASS'Y	자재	9100SW004300	C/T BOX	615*375*435(SW-1/4)	0.25
C/T BOX ASS'Y	자재	9203AS000070	STYROFOAM BOX	352.5*191*146(SW-1)	1
C/T BOX ASS'Y	자재	9203AS000080	STYROFOAM BOX	352.5*191*146(SW-1)	1
C/T BOX ASS'Y	자재	9300A0000020	POLY BAG	90*150*0.05T(FUSE)	1

C/T BOX ASS'Y	자재	9301A0000030	POLY BAG	170*250*0.05T(MANUAL)	1
C/T BOX ASS'Y	자재	9302A000005B	POLY BAG	270*350*0.04T(MW,PW)(SET)HD	1
C/T BOX ASS'Y	자재	9305A000001B	POLY BAG	500*650*0.04T(S2000)(SET,HD)	1
C/T BOX ASS'Y	자재	9400A0000460	SILICAGEL	10g	2
C/T BOX ASS'Y	자재	9900A0000010	봉인납	수출용	1
C/T BOX ASS'Y	자재	9900A0000020	SEALING WIRE	300M/ROLL	0.001

1.3 BODY ASS'Y [140SW4MBODUN0103]

SW-1S	반제품	140SW4MBODUN0103	BODY ASS'Y	SW-1S	
BODY ASS'Y	자재	1000A0000790	SEALING PLATE	29*69.8*1T(SW-Ⅰ)	1
BODY ASS'Y	자재	1260A0000090	BOLT-SEALING	M4*40(NI)SW-1	1
BODY ASS'Y	자재	1502A0004060	SCREW-MACHINE(PH)	M4*6	1

BODY ASS'Y	자재	1510A0003060	SCREW-TAPPING(PH)-1	M3*6	3
BODY ASS'Y	자재	1510A0003080	SCREW-TAPPING(PH)-1	M3*8	4
BODY ASS'Y	자재	1510A0004120	SCREW-TAPPING(PH)-1	M4*12	4
BODY ASS'Y	자재	1510A0004200	SCREW-TAPPING(PH)-1	M4*20	4
BODY ASS'Y	자재	2040-103-0013-0	BATTERY COVER	SW Violet (비난연)	1
BODY ASS'Y	자재	2040-103-0012-0	BODY	SW Violet (비난연)	1
BODY ASS'Y	자재	2008A000001B	FOOT	PVCø40*42(SW-1)	4
BODY ASS'Y	자재	2022A0000041	WATER LEVEL GAGE	ø14.9*8(S-2000)상보	1
BODY ASS'Y	자재	7642S0000600	METAL CLAMP	6N	5

1.4 L/C BRACKET ASS'Y [140SW4MLCBUN0103]

SW-1S	반제품	140SW4MLCBUN0103	BRACKET ASS'Y	SW-1S	

L/C BRACKET ASS'Y	자재	1030A000039A	BRACKET-L/C LOWER	SPC 120*100*4T(SW-1)	1
L/C BRACKET ASS'Y	자재	1030A000040B	BRACKET L/C-TOP	SPC160*110*3.2T(SW-5,10K)	1
L/C BRACKET ASS'Y	자재	1130A0000020	BOLT-LIMIT	M5*33.8(Zn 황)(SW-10,20,30)	2
L/C BRACKET ASS'Y	자재	1130A0000030	BOLT-LIMIT	M5*34.9(Zn 백)(SW-2,5,10)	2
L/C BRACKET ASS'Y	자재	1510A0004120	SCREW-TAPPING(PH)-1	M4*12	4
L/C BRACKET ASS'Y	자재	1530MSU05150	BOLT-WRENCH	M5*15-SUS	4
L/C BRACKET ASS'Y	자재	1532A0004120	BOLT-WRENCH(ST)	M4*12(SP 30K,60lb 2EA)	1
L/C BRACKET ASS'Y	자재	1540A0005000	NUT(HEX)	M5*0.8	4
L/C BRACKET ASS'Y	자재	1540MSU04000	NUT(HEX)	M4*07-SUS	1
L/C BRACKET ASS'Y	자재	1552MSU05000	WASHER(OTO)	ø5-SUS	4
L/C BRACKET ASS'Y	자재	2600A000051A	TRAY RUBBER B	NBRø17.4*21(SW2,5,10K)BLACK	4

1.5 UPPER CASE ASS'Y [140SW4MUPCUN0103]

SW-1S	반제품	140SW4MUPCUN0103	UPPER CASE ASS'Y	SW-1S	
UPPER CASE ASS'Y	자재	1510A0004200	SCREW-TAPPING(PH)-1	M4*20	4
UPPER CASE ASS'Y	자재	1563A0003080	RIVET	@3.2*8	2
UPPER CASE ASS'Y	자재	1810SW000332	SPEC PLATE	SW-1(영공)(SW,SW-II 공용)	1
UPPER CASE ASS'Y	자재	2040-103-0014-0	UPPER CASE	SW Violet (비난연)	1
UPPER CASE ASS'Y	자재	2040-103-0015-0	TRAY	SW Violet (비난연)	1
UPPER CASE ASS'Y	자재	2000A0000750	DISPLAY COVER	ABS750 124.7*53.7*3.5(SW)(R)	1
UPPER CASE ASS'Y	자재	2010A0000080	WATER LEVEL GAGE COVER	ø24.8*0.5T(LP-1,II,SW)	1
UPPER CASE ASS'Y	자재	2050SWA10222	DISPLAY COVER	SW-1(10kg)유럽공용 심볼	1
UPPER CASE ASS'Y	자재	2200SW000220	KEY BOARD PAD	SW-1(S)(HOLD)유럽공용심볼	1
UPPER CASE ASS'Y	자재	2632A0000160	DISPLAY COVER TAPE	124*53(SW-1)	1

1.6 SW-5L [LLBSW0153G000000]

SW	자재	9800A0000040	LOCKING PAINT	접착제(200G)(녹색)	0.002
SW	자재	8ZSW0KK00500	LOAD CELL	SW-5L(CHINA)	1
SW	자재	9800A000001A	순간본드	ALTECO-EE(20g)	0.002
SW	자재	9800A0000030	BOND	#575 180ml	0.002

8.1.3 SW-1W (Mechanical part)

1.1 BODY ASS'Y

SW-1W	반제품		BODY ASS'Y	SW-1W	Q'ty
BODY ASS'Y		1000A0002270	CONNECTOR RUBBER PLATE	SW-1W(39.6*29.6*1.2t)	1
BODY ASS'Y		1005A0001150	SEALING WASHER	ø5*10 (SW-WATERPROOF)	8
BODY ASS'Y		1030A0002030	SEALING PLATE	35.2*26*1t DB-II	1

BODY ASS'Y		1265A0000010	BOLT-SEALING	M3*9(황동,HEAD 3mm 포함)	2
BODY ASS'Y		1502MSU05120	SCREW-MACHINE(PH)	M5*0.8*12-SUS	8
BODY ASS'Y		1510A0003060	SCREW-TAPPING(PH)-1	M3*6	2
BODY ASS'Y		1510A0003080	SCREW-TAPPING(PH)-1	M3*8	8
BODY ASS'Y		1510A0004060	SCREW-TAPPING(PH)-1	M4*6	1
BODY ASS'Y		1510MSU04120	SCREW-TAPPING(PH)-1	M4*12-SUS	6
BODY ASS'Y		1561MSU05000	E-RING	ø5*ø11*0.6-SUS	1
BODY ASS'Y		2040-103-0016-0	BODY	SW-1W Violet (비난연)	1
BODY ASS'Y		2040-103-0017-0	BATTERY COVER	SW-1W Violet (비난연)	1
BODY ASS'Y		2040-103-0020-0	BATTERY COVER BOLT	SW-1W Violet (비난연)	1
BODY ASS'Y		2040-103-0021-0	BATTERY COVER GUIDE	SW-1W Violet (비난연)	1
BODY ASS'Y		2008A000001B	FOOT	PVCø40*42(SW-1)	4

BODY ASS'Y		2022A0000041	WATER LEVEL GAGE	ø14.9*8(S-2000)상보	1
BODY ASS'Y		2600A000084A	BATTERY COVER GASKET	SW-WATERPROOF (150.2*187.8*4)	1
BODY ASS'Y		2600A0000850	CONNECTOR RUBBER	SW-WATERPROOF (39.5*45.5*15)	1
BODY ASS'Y		2630A0000030	O-RING	P5(HBB)	8

1.2 C/T BOX ASS'Y

SW-1W	반제품		C/T BOX ASS'Y	SW-1W	
C/T BOX ASS'Y	자재	7510P0911220	ADAPTOR	110/220V9V/300mA(EP,PW)	1
C/T BOX ASS'Y	자재	7520P0001500	BATTERY-MN	R20-1.5V-D(TP,SW)	6
C/T BOX ASS'Y		9100SW00133B	C/T BOX	SW-1(360*297*215, 영문)	1
C/T BOX ASS'Y		9100SW004300	C/T BOX	615*375*435(SW-1/4)	0.25
C/T BOX ASS'Y		9203AS000200	STYROFOAM BOX	SW-WATERPROOF(R) 352.5*146*191	1

C/T BOX ASS'Y		9203AS000210	STYROFOAM BOX	SW-WATERPROOF(L) 352.5*146*191	1
C/T BOX ASS'Y		9300A0000020	POLY BAG	90*150*0.05T(FUSE)	1
C/T BOX ASS'Y		9301A0000030	POLY BAG	170*250*0.05T(MANUAL)	1
C/T BOX ASS'Y		9302A000005B	POLY BAG	270*350*0.04T(MW,PW)(SET)HD	1
C/T BOX ASS'Y		9305A000001B	POLY BAG	500*650*0.04T(S2000)(SET,HD)	1
C/T BOX ASS'Y		9400A0000460	SILICAGEL	10g	2
C/T BOX ASS'Y		9900A0000010	봉인납	수출용	1
C/T BOX ASS'Y		9900A0000020	SEALING WIRE	300M/ROLL	0.1

1.3 BODY ASS'Y

SW-1W	반제품		BODY ASS'Y	SW-1W	
BODY ASS'Y		1590A000006A	BATTERY SPRING B	ø0.9*ø16*50*19-SUS(SW-1)	1

BODY ASS'Y		1590A000007B	BATTERY SPRING C	ø0.9*ø16*37*8	1
BODY ASS'Y		1590A000014A	BATTERY SPRING A	ø0.9*ø16*50*19(SW-1)	1
BODY ASS'Y		1590A0000240	BATTERY SPRING D	ø0.9*ø16*37*26-SWP(SW-1)	1
BODY ASS'Y		7840W000219B	CONNECTOR WIRE	2P*190mm SW-WP (+)BATTERY WIRE	1
BODY ASS'Y		7840W0002230	CONNECTOR WIRE	2P*230mm SW-WP (-)BATTERY WIRE	1
BODY ASS'Y		7840W0003230	CONNECTOR WIRE	3P*230mm-303(EP,SW)	1

1.4 L/C BRACKET ASS'Y

SW-1W	반제품		BRACKET ASS'Y	SW-1W	
L/C BRACKET ASS'Y		1005A0001150	SEALING WASHER	ø5*10 (SW-WATERPROOF)	2
L/C BRACKET ASS'Y		1030A000039A	BRACKET-L/C LOWER	SPC 120*100*4T(SW-1)	1
L/C BRACKET ASS'Y		1100A0000740	BRACKET-L/C TOP	SW-WATERPROOF(103.9*73.9*14.5)	1

L/C BRACKET ASS'Y		1130A0000030	BOLT-LIMIT	M5*34.9(Zn 백)(SW-2,5,10)	4
L/C BRACKET ASS'Y		1510MSU04120	SCREW-TAPPING(PH)-1	M4*12-SUS	4
L/C BRACKET ASS'Y		1530MSU05100	BOLT-WRENCH	M5*1.0*10-SUS	2
L/C BRACKET ASS'Y		1530MSU05150	BOLT-WRENCH	M5*15-SUS	4
L/C BRACKET ASS'Y		1532A0004120	BOLT-WRENCH(ST)	M4*12(SP 30K,60lb 2EA)	1
L/C BRACKET ASS'Y		1540A0005000	NUT(HEX)	M5*0.8	4
L/C BRACKET ASS'Y		1540MSU04000	NUT(HEX)	M4*07-SUS	1
L/C BRACKET ASS'Y		1552MSU05000	WASHER(OTO)	ø5-SUS	4
L/C BRACKET ASS'Y		2040-103-0022-0	PLATFORM	SW-1W Violet (비난연)	1
L/C BRACKET ASS'Y		2630A0000030	O-RING	P5(HBB)	2

1.5 UPPER CASE ASS'Y

SW-1W	반제품		UPPER CASE ASS'Y	SW-1W	
UPPER CASE ASS'Y		1000A0002280	BELLOWS PLATE	SW-1W(ø129.3*1.6t)	1
UPPER CASE ASS'Y		1000A0002290	TRAY	SW-1W(253.4*202*17.8)(SUS)	1
UPPER CASE ASS'Y		1502MSU03080	SCREW-MACHINE(PH)	M3*8-SUS	4
UPPER CASE ASS'Y		1510MSU04120	SCREW-TAPPING(PH)-1	M4*12-SUS	6
UPPER CASE ASS'Y		1563A0003080	RIVET	@3.2*8	2
UPPER CASE ASS'Y		1575A0012100	SCREW IN VENT	M12*10(EPTFE)(WATERPROOF)	1
UPPER CASE ASS'Y		2040-103-0018-0	UPPER CASE	SW-1W Violet (비난연)	1
UPPER CASE ASS'Y		2040-103-0019-0	TRAY	SW-1W Violet (비난연)	1
UPPER CASE ASS'Y		2015A0000300	DISPLAY FILTER	SW-WATERPROOF (124.4*55.6*1t)	1
UPPER CASE ASS'Y		2021SW800331	SHEET	SW-1W(TRAY SHEET),ENGLISH	1
UPPER CASE ASS'Y		2600A0000860	UPPER CASE GASKET	SW-WATERPROOF (264.5*307.9*7)	1

UPPER CASE ASS'Y		2620A0000310	BELLOWS	SW-WATERPROOF (ø129.3*17)	1

1.6 UPPER CASE ASS'Y

SW-1W	반제품		IMAGE ASS'Y	SW-1W	
IMAGE ASS'Y		1810SW000332	SPEC PLATE	SW-1(영공)(SW,SW-II 공용)	1
IMAGE ASS'Y		2050W5B20330	DISPLAY COVER	SW-1W(20kg)(ENGLISH)(1/10000)	1
IMAGE ASS'Y		2200W5A20330	KEY BOARD PAD	SW-1W(20kg)(ENGLISH)(1/10000)	1
IMAGE ASS'Y		9002SW300330	MANUAL	SW-1S1C1W(영문)	1

1.7 SW-5L [LLBSW0153G000000]

SW	자재	9800A0000040	LOCKING PAINT	접착제(200G)(녹색)	0.002
SW	자재	8ZSW0KK00500	LOAD CELL	SW-5L(CHINA)	1

SW	자재	9800A000001A	순간본드	ALTECO-EE(20g)	0.002
SW	자재	9800A0000030	BOND	#575 180ml	0.002